Climate Prediction Program for the Americas (CPPA)

In FY2009, CPPA is soliciting proposals in the following research areas:

Sources and limits of climate predictability for the Americas at intraseasonal to interannual time scales: The topical areas include 1) diagnostic analyses and modeling studies on climate predictability in the Intra-Americas Sea (IAS) region (including the Caribbean Sea, the Gulf of Mexico, the adjacent lands, and the ocean off the west coast of Central America and northernmost South America) and the IAS impact on climate predictability in the Americas, including the linkage to the American monsoons; 2) land surface-climate interactions with a focus on cold season and high-elevation processes; 3) predictability of the statistical occurrence of high-impact extremes in the U.S., such as floods, hurricanes, heat waves, and winter storms.

Representation of physical processes in climate models: Research foci include 1) use of cloud-resolving models, together with diagnostic analyses, to improve physical parameterization schemes in climate models, including cloud simulations, cloud-radiation interactions, and turbulence; 2) improving land surface models, focusing on estimating land surface properties and parameters from remote-sensing data and representing irrigation effects and/or sub-grid sources of surface water in land surface models in a global domain; and 3) improving simulation and prediction of the Madden-Julian Oscillation (MJO), including associated tropical convection. Close working relationships with NCEP or GFDL model developers are encouraged.

Hydrologic and water resource applications: CPPA seeks proposals to 1) develop U.S. nation-wide hydrologic outlooks based on climate predictions, including operational climate outlooks and dynamic model forecasts. Research on hydrologic forecast verification, hydrologic data assimilation, and use of remote-sensing data for seasonal water supply forecasts are also encouraged; and 2) demonstrate that nation-wide hydrologic forecasts can be applied at scales useful for water resources management. Coordination with the National Integrated Drought Information System (NIDIS) and NWS River Forecast Centers is encouraged.

For further information, investigators may contact the CPPA program managers Jin Huang (301-734-1226, Jin.Huang@noaa.gov or Annarita Mariotti (301-734-1237, Annarita.Mariotti@noaa.gov).